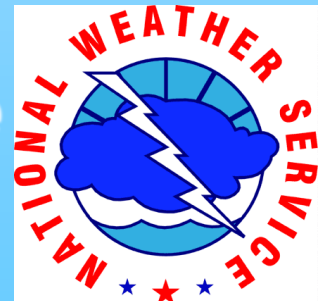


The Blizzard of '78... Revisited



***NOAA's National Weather Service
Taunton, Massachusetts***



Historic Nor'easters of the 20th Century

- Christmas Night Storm - 1909
 - Severe coastal flooding
- Valentine's Day Storm - 1940
- March 1956 Blizzard
 - *Etrusco* freighter washed ashore at Scituate
- February 1969
 - Record snowfall
- **Blizzard of '78** 
- October 1991
- December 1992
- October 1996
 - Stream flooding
- April 1997



The Patriot Ledger

Two-Foot Snowfall Predicted For Area

Too Much! Even For New England

'T' Clogs, Closes; Captures 1000s

Saga Of The Snowbound 'T'

Are these headlines about the ***Blizzard of '78??***

NO!!!!!!!!

Friday, January 20, 1978



SNOWBOUND!

*Front page of the Boston Globe
Saturday, January 21, 1978...*



**...this poorly forecast storm set the stage
for the ensuing disaster that
followed two weeks later...**



GLOBE FILE PHOTO/DAVID L. RYAN

ROUTE 128, DEDHAM - FEBRUARY 1978

The blizzard of 1978

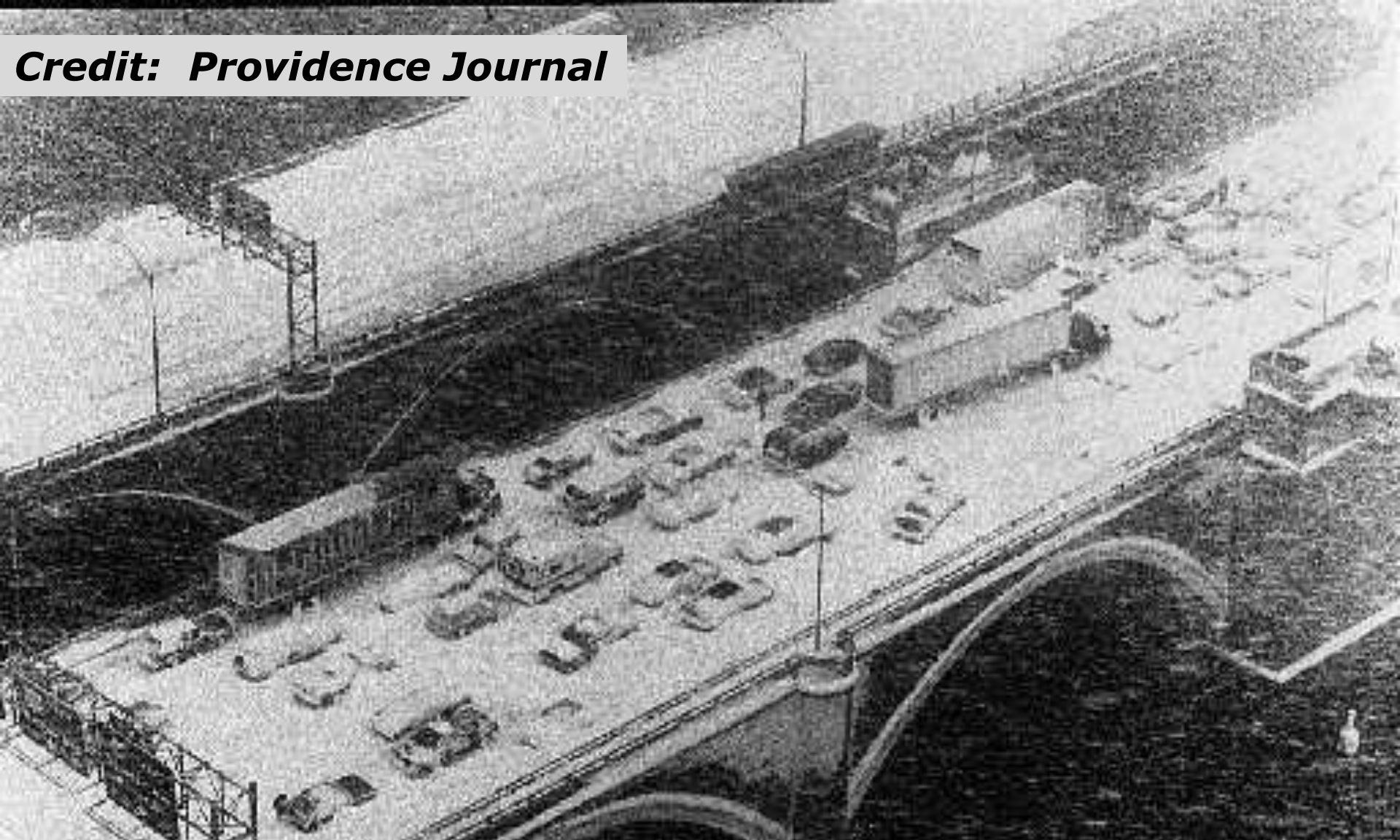
Credit: Boston Globe

Ingredients "in the mix" to create the *Blizzard of '78*

- Unusually strong high pressure over central Canada with very cold air, and nearly stationary high pressure over Greenland
- Astronomical high tides in early February 1978
 - New moon, moon in “perigee”, NE “fetch”
- Low pressure at the surface and aloft moved out of the Great Lakes to the mid Atlantic coast
- Cold Canadian air to the north, low pressure to the south and relatively warm ocean air mixed together to form “*The Blizzard*”, which stalled off southern New England for nearly 36 hours

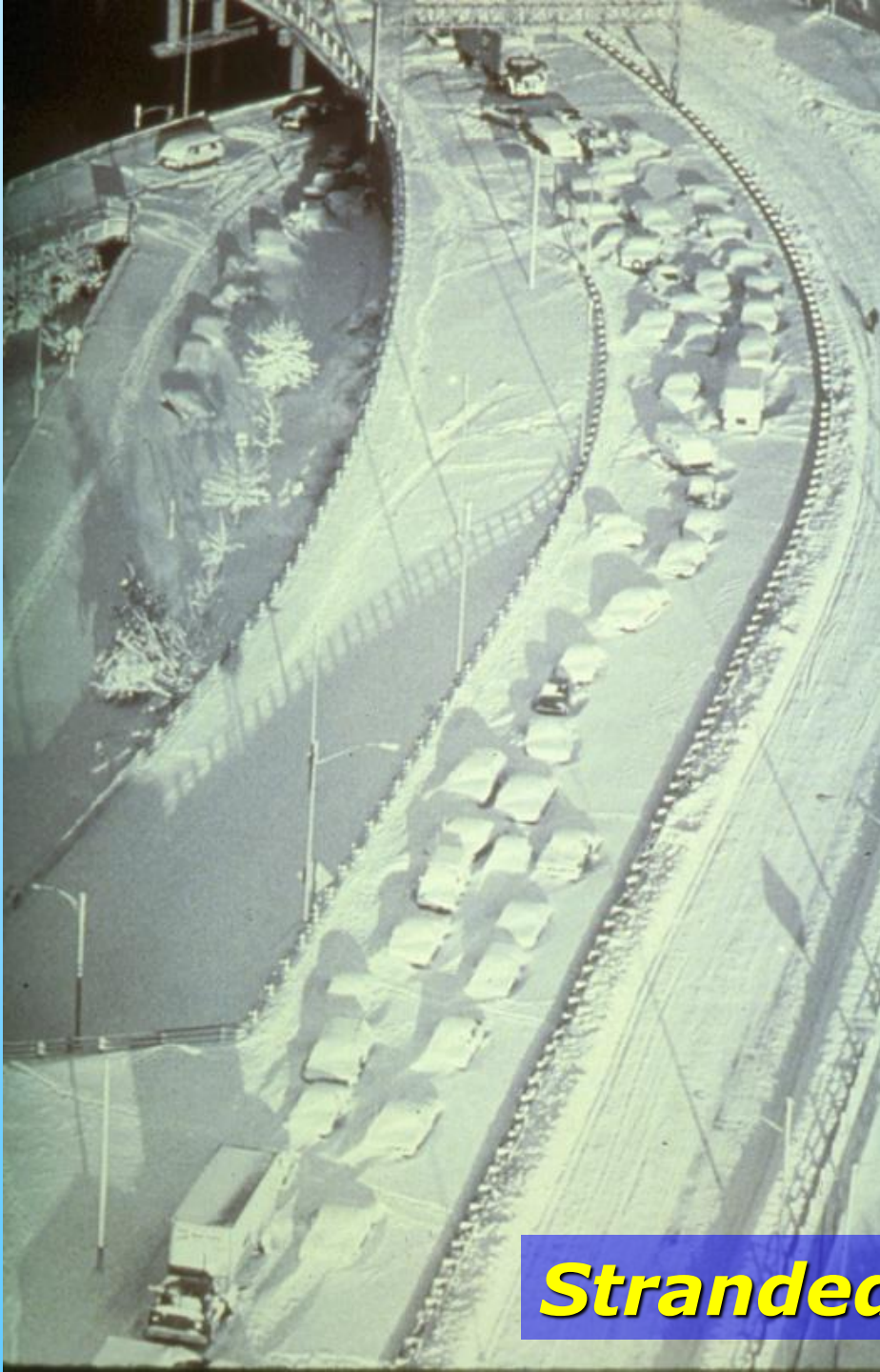


People line up for a bus ride in Providence, as the Blizzard of '78 starts to paralyze traffic



Credit: Providence Journal

STOPPED IN THEIR TRACKS: Cars, trucks and rescue vehicles are stopped dead in their tracks on Route 195 East along the Washington Bridge in Providence



Stranded cars on Route 128



***Route 128 near Great Blue Hill
in Canton***

NO EXIT: The scene on Route 95 near RI exits 21 and 22 shows the total obstruction of the interstate



Credit: Providence Journal

Credit: Providence Journal



***FOOTPRINTS WITH A MESSAGE:
A street in Cranston, RI needs plowing***

Metro | Region *Credit: Boston Globe*

Blizzard of '78 | STORM OF THE CENTURY

"I'll never forget

it. I was sitting in my living room when the waves and the wind were rocking the house. Then, this one wave hit. It was a sound like no other. It roared and whined like a siren. The house groaned and I knew it was time to get out."



- Ginny Deveau, whose home in the Beachmont section of Revere was destroyed by the storm. Homes in Scituate (above) took a similar beating.

Sea-ravaged houses along Peggoty Beach in Scituate



Sea-ravaged houses along Peggoty Beach in Scituate.

Credit: Boston Globe

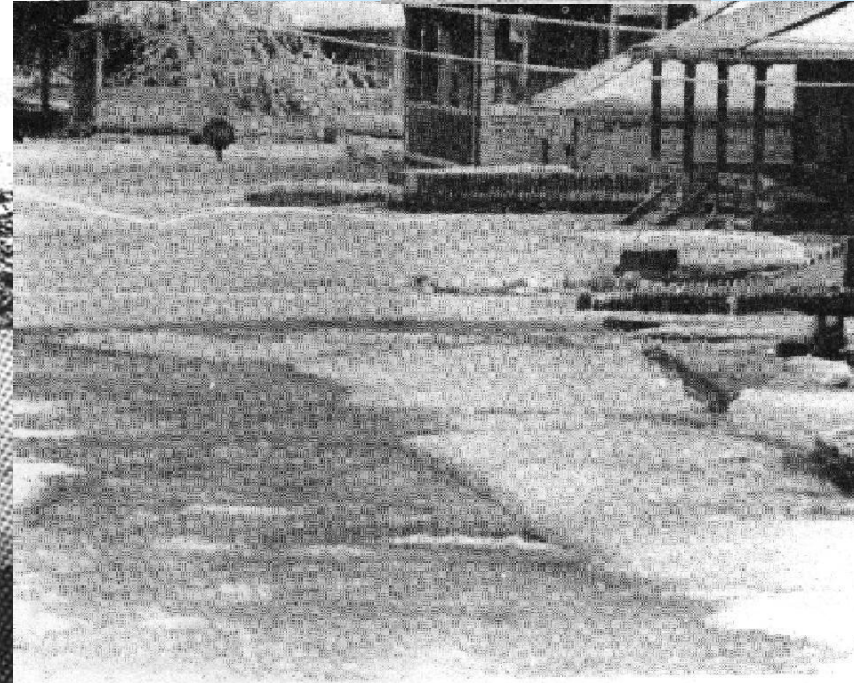
(Globe aerial photo by Bill Brett)

Credit: Boston Globe

***A home lost in Revere due to
Blizzard's storm tide***



Gun Rock, Disaster



***Hull takes the brunt of the storm...
through 4 successive tide cycles***

Kenberma St. Ocean side

Police Photos

Worst snow storm in R.I. history halts transit, strands thousands



(AP Wirephoto) The snow piled up on Route 1 and near Exit 2 and 3 during the late afternoon of the blizzard. The snow piled up on Route 1 and near Exit 2 and 3 during the late afternoon of the blizzard.

Governor is told U.S. will send storm aid

By William J. Bennett
 Providence Staff Writer
 The federal government has agreed to send \$10 million in aid to Rhode Island to help pay the costs of the snowstorm, according to a statement from the state's Department of Transportation. The aid is part of a larger federal disaster relief package. The state's Department of Transportation is currently assessing the damage to the state's infrastructure. The aid will be used to help pay the costs of the snowstorm, including the costs of clearing the roads and the costs of providing food and shelter for the stranded motorists.

Billboard death count in R.I. is eight

Garrahy declares state of disaster

By William J. Bennett
 Providence Staff Writer
 Gov. Lincoln D. Chafee has declared a state of disaster for Rhode Island because of the snowstorm. The declaration allows the state to request federal aid for disaster relief. The state's Department of Transportation is currently assessing the damage to the state's infrastructure. The aid will be used to help pay the costs of the snowstorm, including the costs of clearing the roads and the costs of providing food and shelter for the stranded motorists.

Innkeepers by chance, not choice

By William J. Bennett
 Providence Staff Writer
 Many innkeepers in Rhode Island are reporting that they have received a large number of calls from stranded motorists. The innkeepers are reporting that they have received calls from motorists who are looking for a place to stay. The innkeepers are reporting that they have received calls from motorists who are looking for a place to stay. The innkeepers are reporting that they have received calls from motorists who are looking for a place to stay.

Megalopolis staggers under emergency status

By William J. Bennett
 Providence Staff Writer
 The megacity of New York City is under a state of emergency because of the snowstorm. The city's Mayor Rudy Giuliani has declared a state of emergency. The city's Mayor Rudy Giuliani has declared a state of emergency. The city's Mayor Rudy Giuliani has declared a state of emergency.



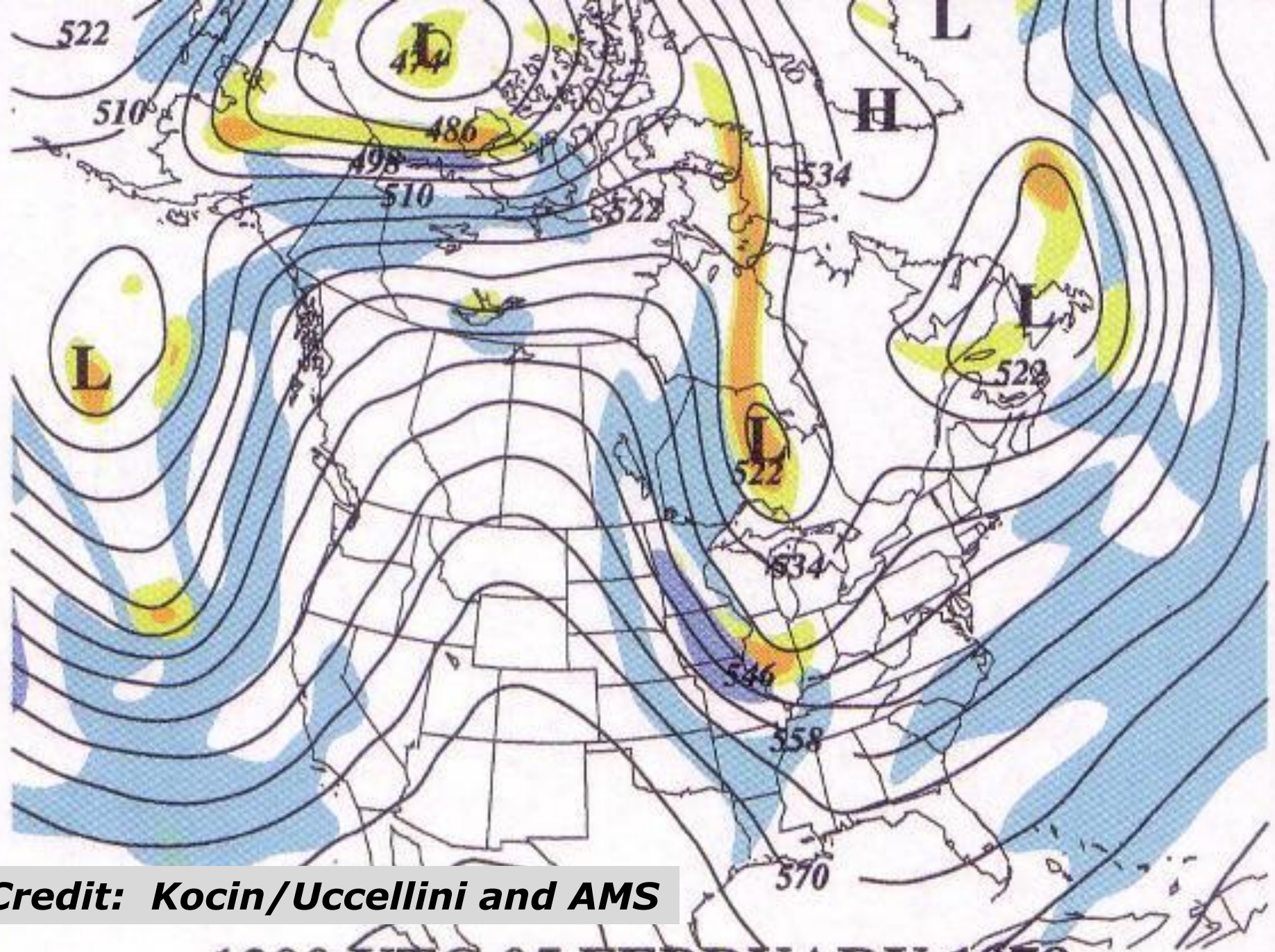
(AP Wirephoto) A long line of people stands outside a McDonald's restaurant in Providence, Rhode Island, during the snowstorm.

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| Page 8 | Obituaries |



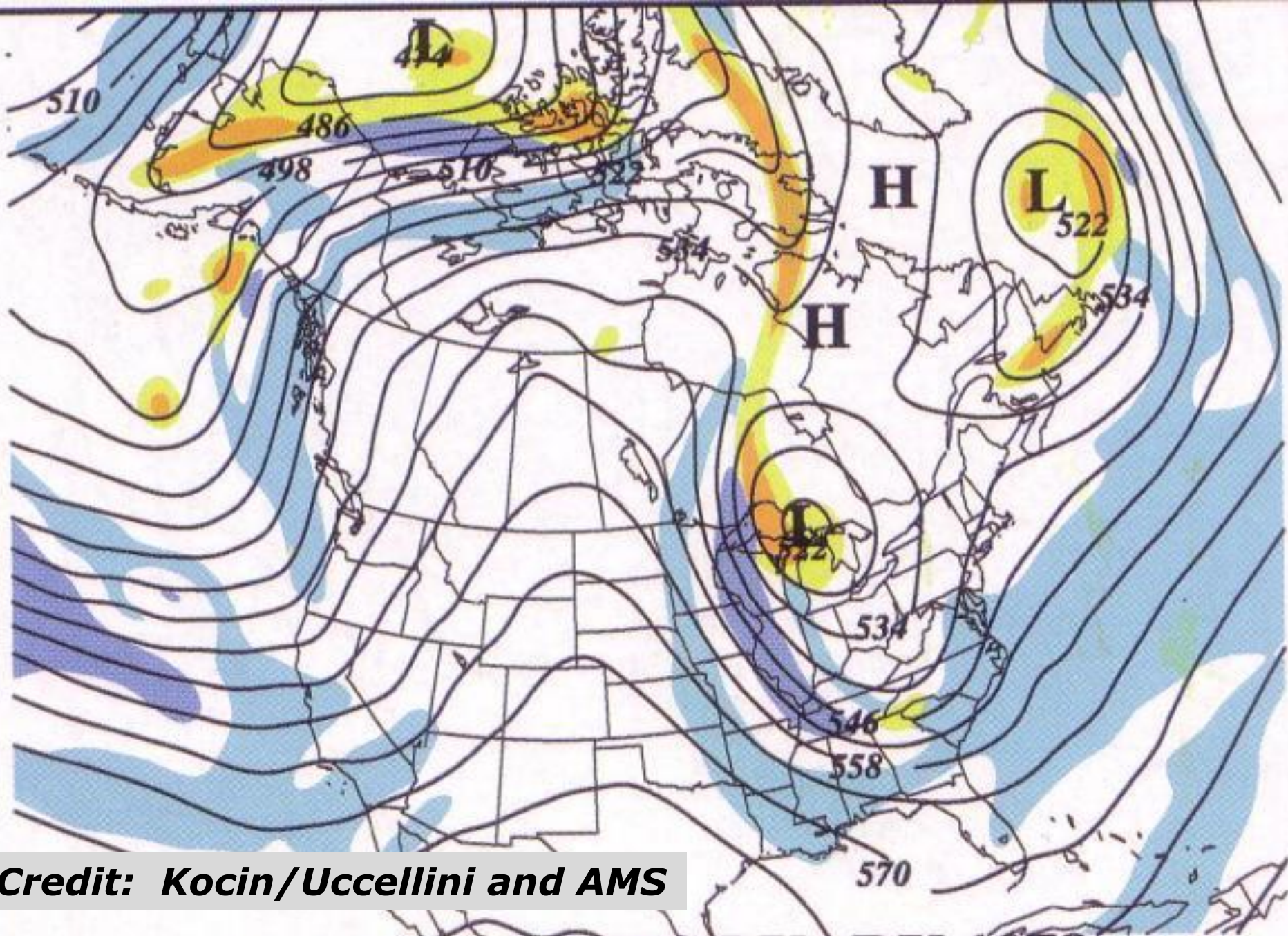
Credit: Providence Journal

**500 MB Heights and
Upper-Level Winds
7 AM Feb 5 to 7 AM Feb 7**



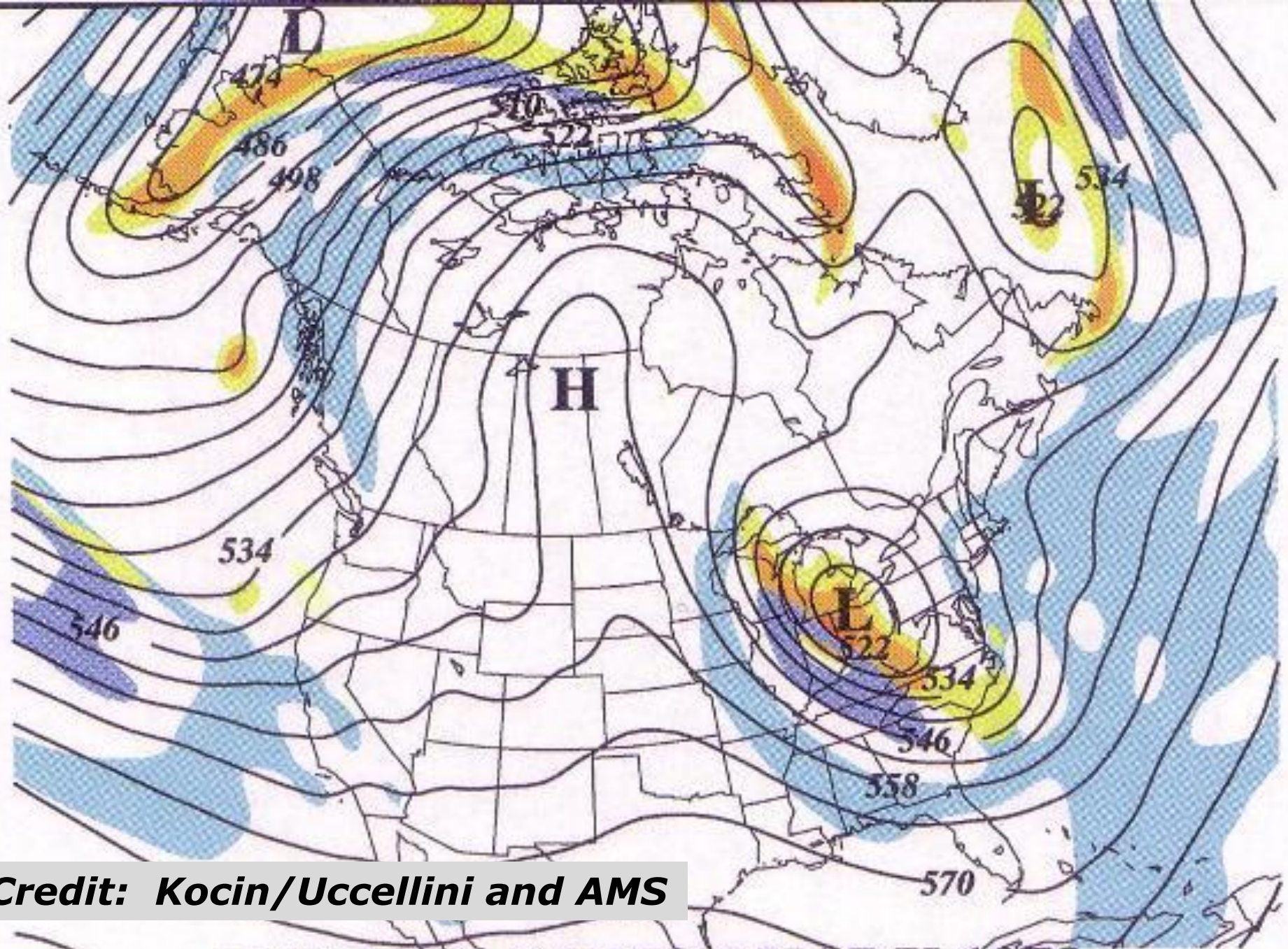
Credit: Kocin/Uccellini and AMS

1200 UTC 05 FEBRUARY 1978



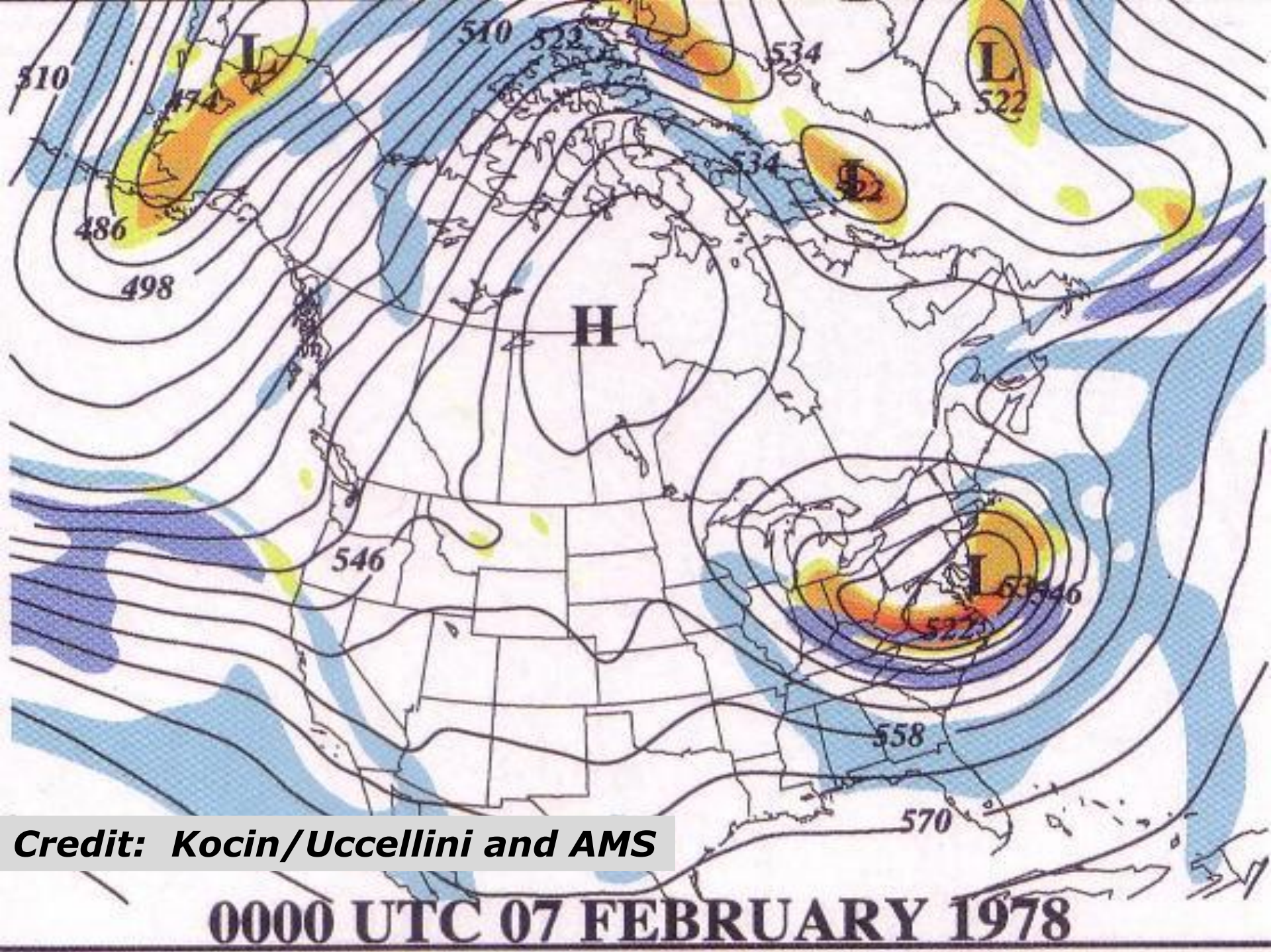
Credit: Kocin/Uccellini and AMS

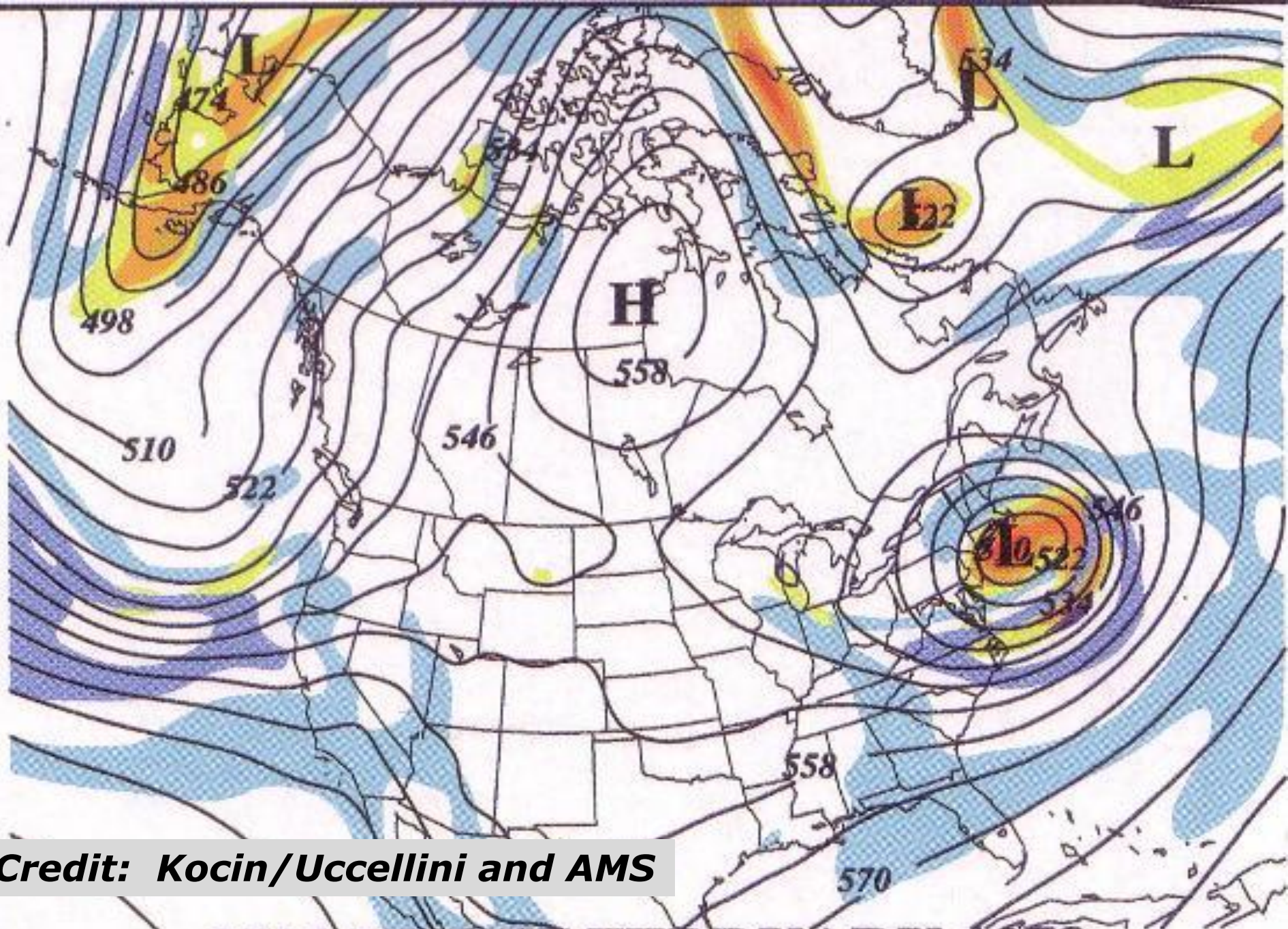
0000 UTC 06 FEBRUARY 1978



Credit: Kocin/Uccellini and AMS

1200 UTC 06 FEBRUARY 1978



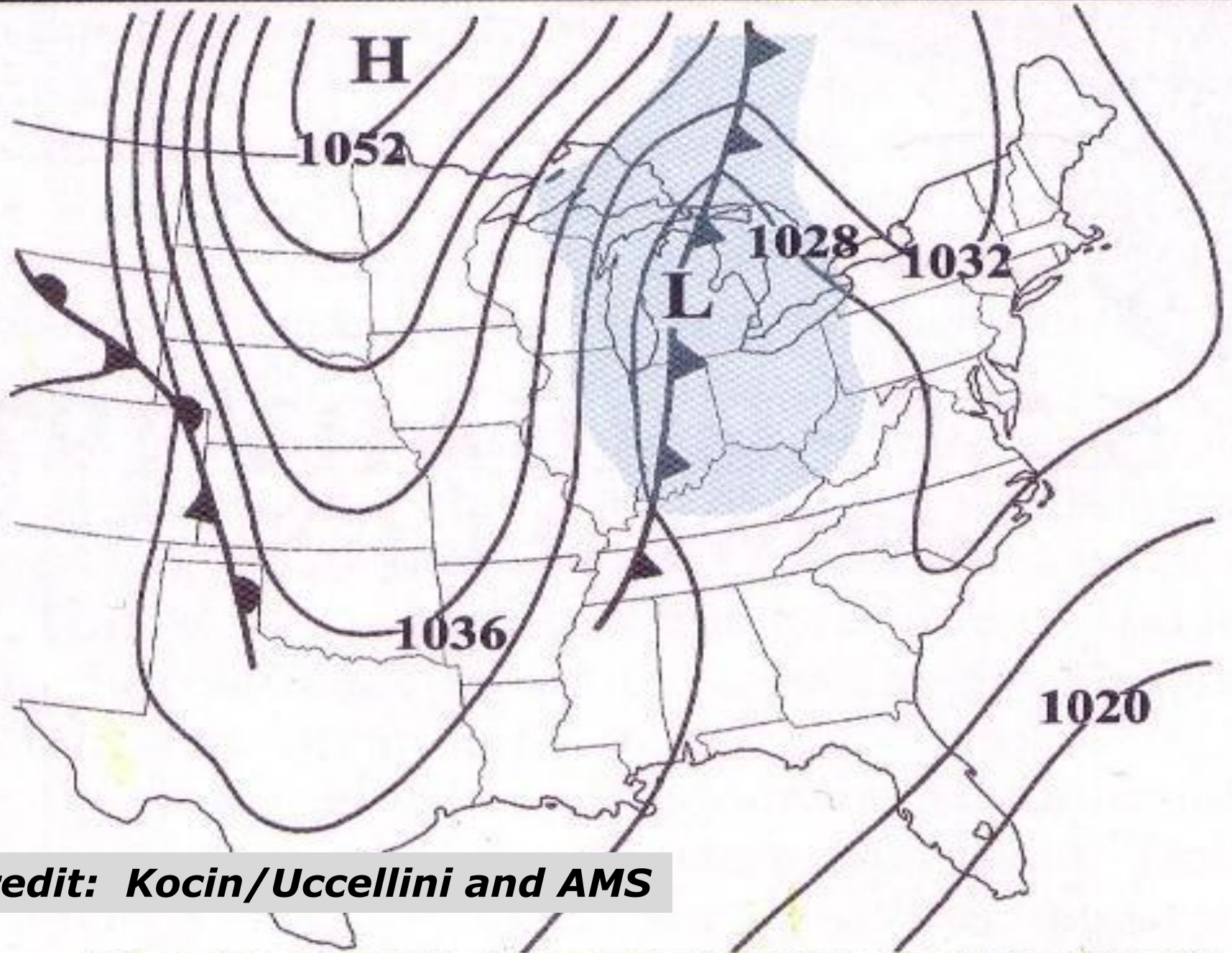


Credit: Kocin/Uccellini and AMS

1200 UTC 07 FEBRUARY 1978

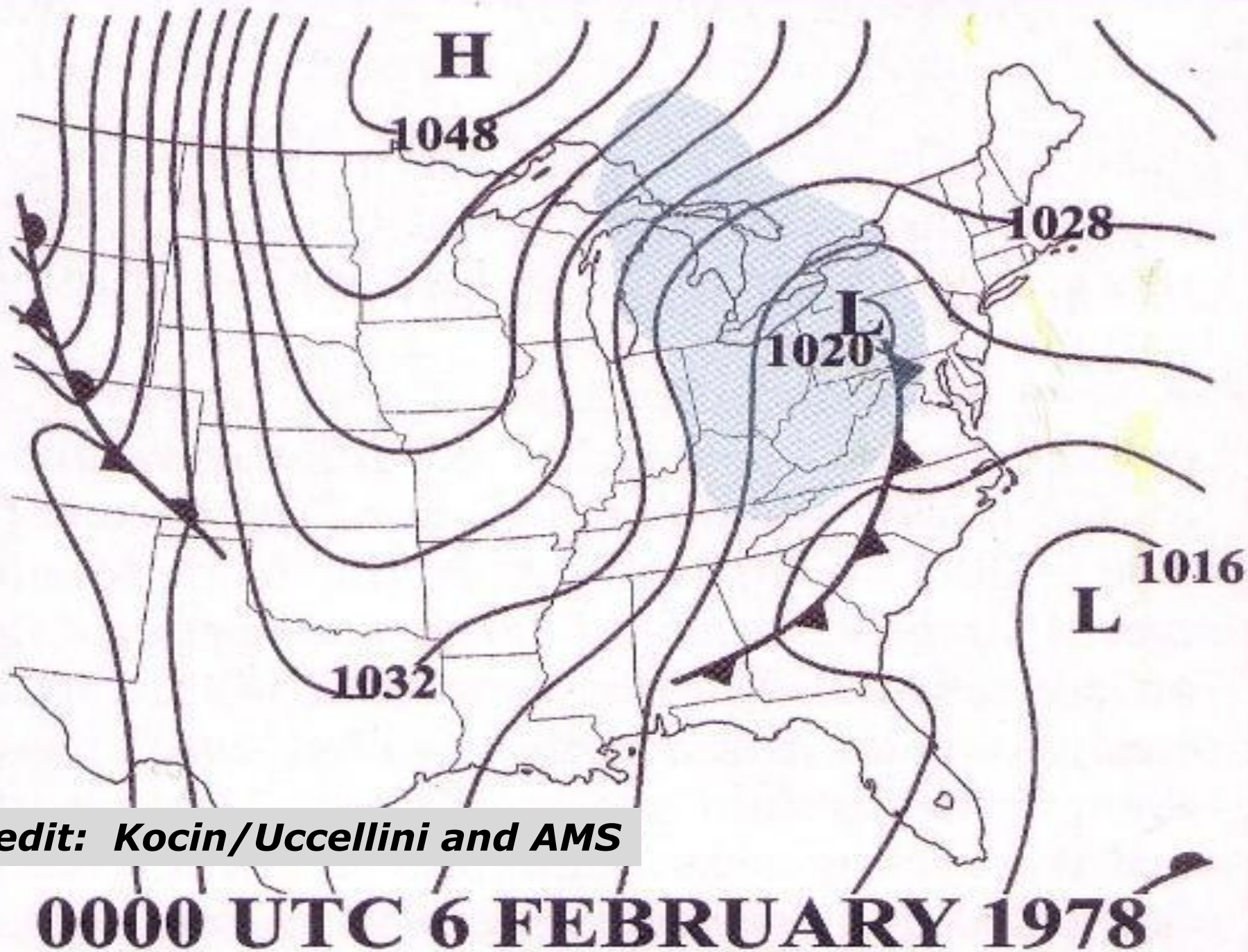
Surface Weather Analysis

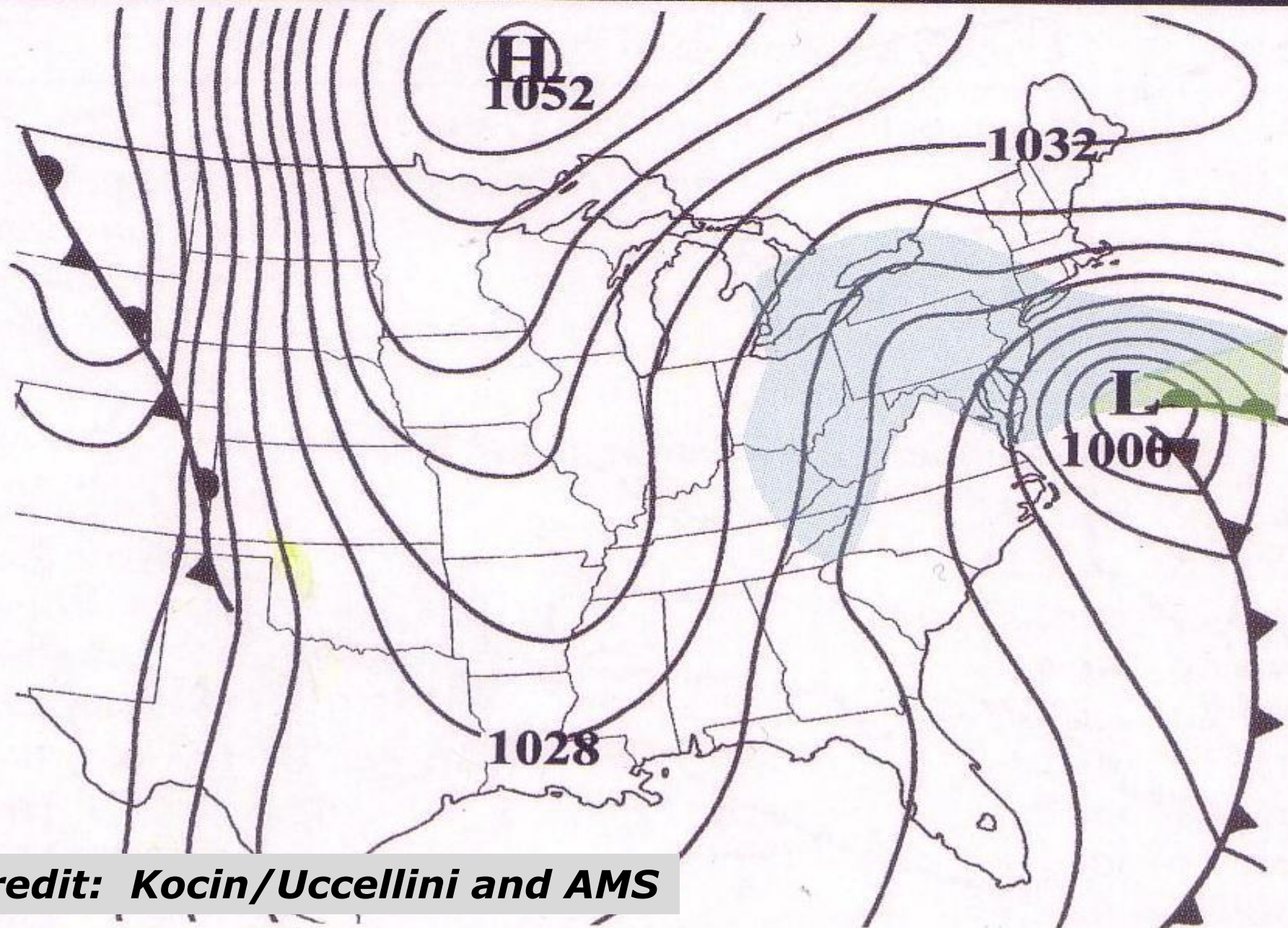
7 AM Feb 5 to 7 AM Feb 7



Credit: Kocin/Uccellini and AMS

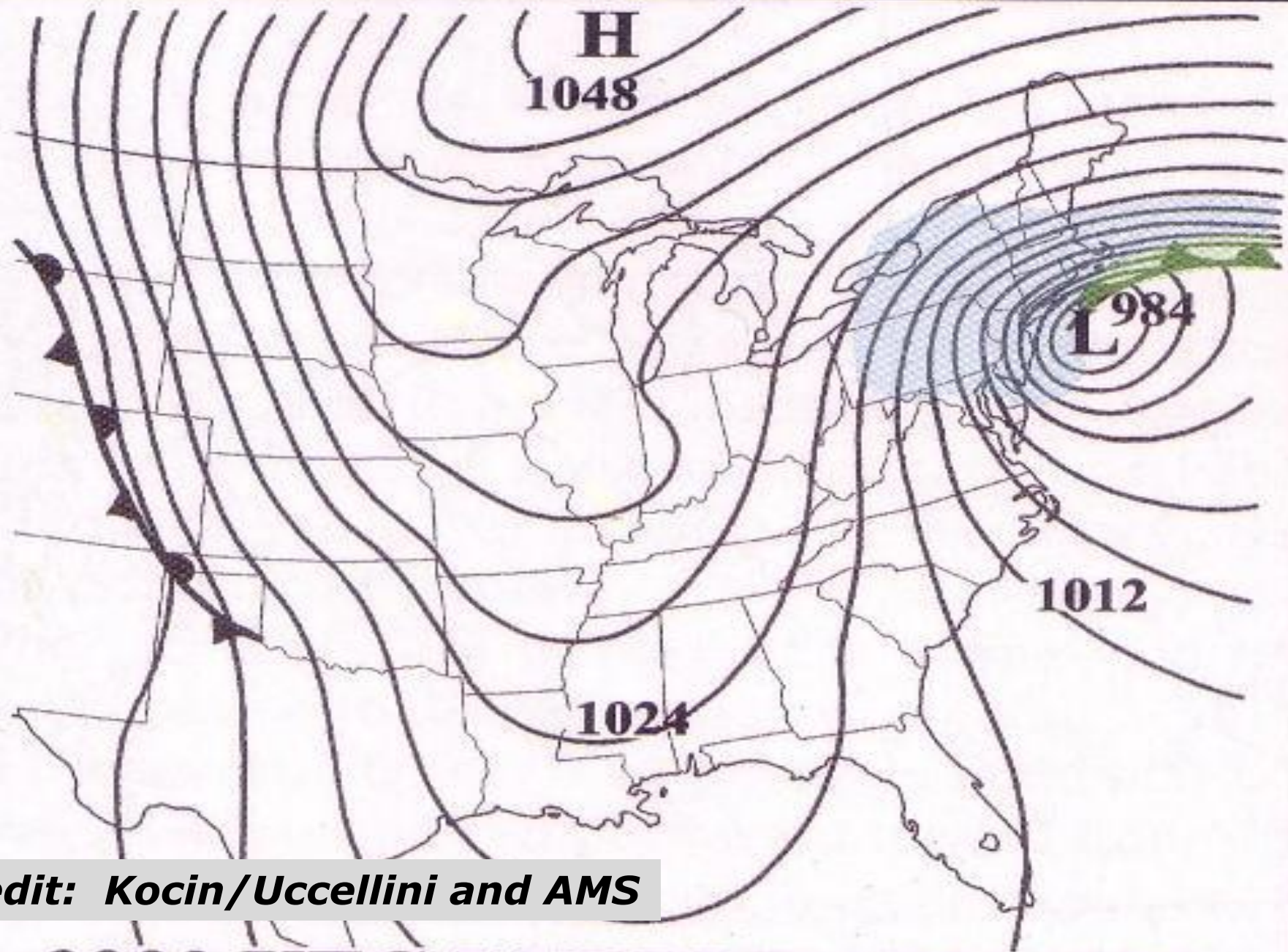
1200 UTC 5 FEBRUARY 1978





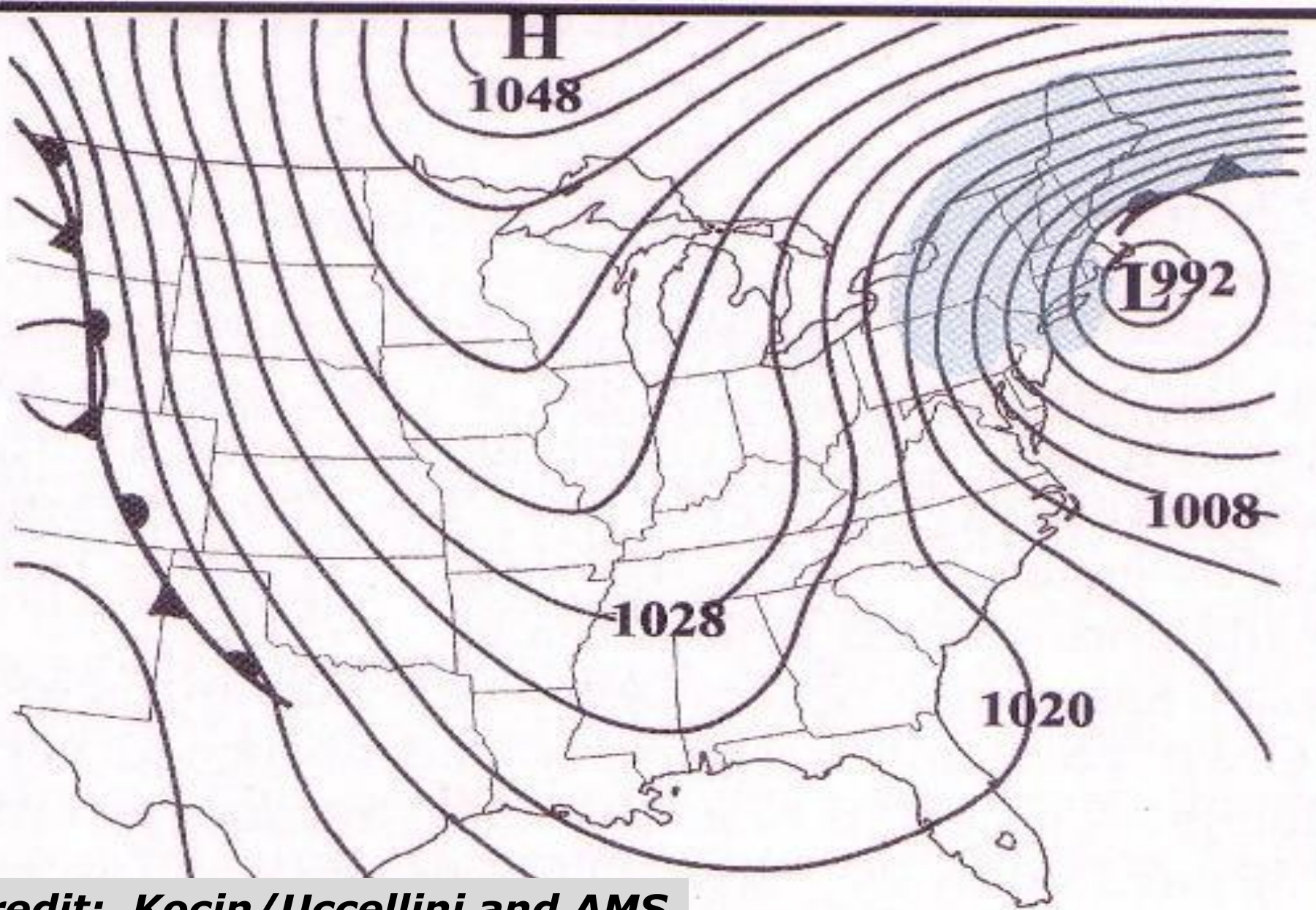
Credit: Kocin/Uccellini and AMS

1200 UTC 6 FEBRUARY 1978



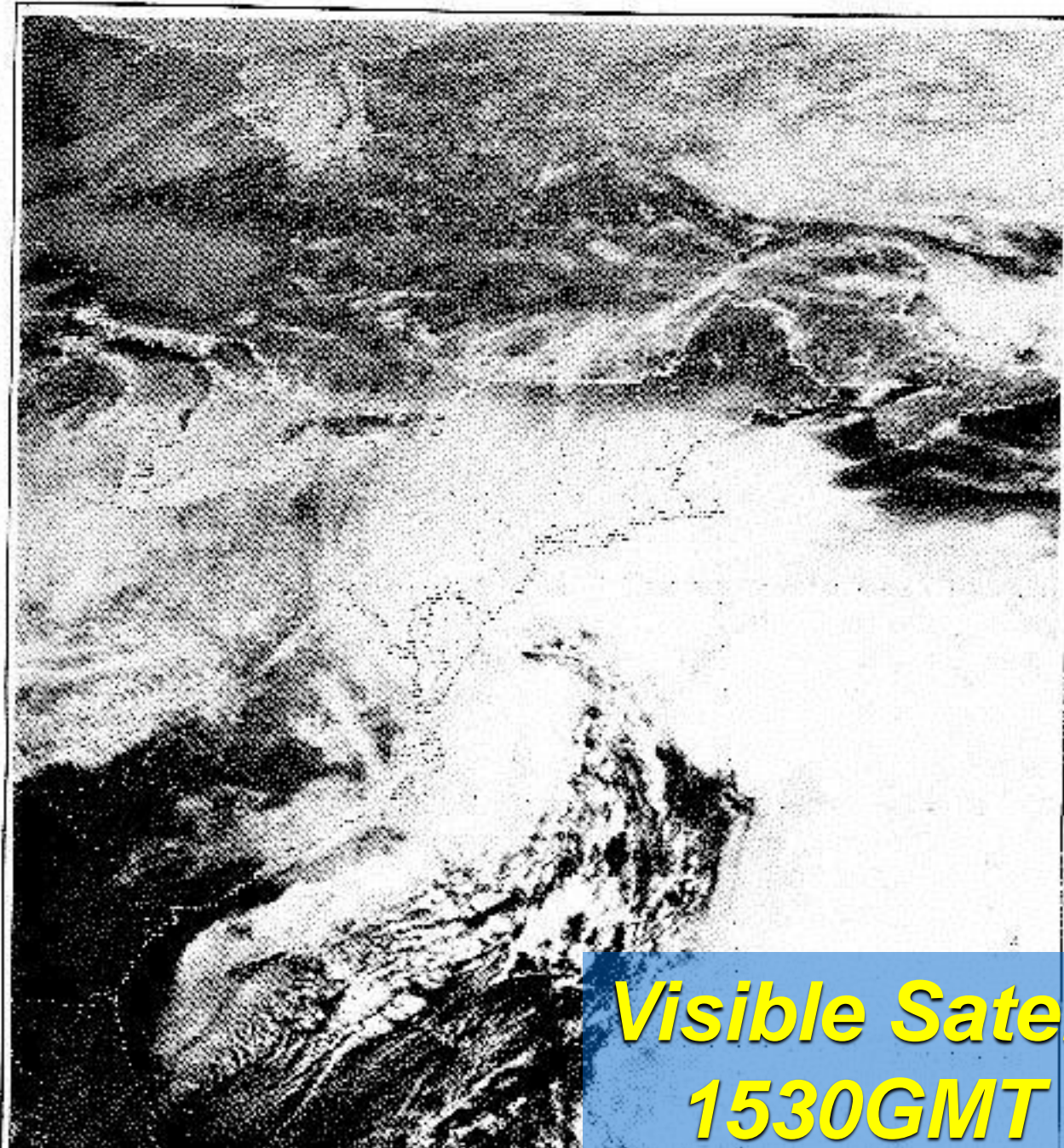
Credit: Kocin/Uccellini and AMS

0000 UTC 7 FEBRUARY 1978



Credit: Kocin/Uccellini and AMS

1200 UTC 7 FEBRUARY 1978



***Visible Satellite 6FEB78
1530GMT (1030 AM)***



***Visible Satellite 7FEB78
1530GMT (1030 AM)***

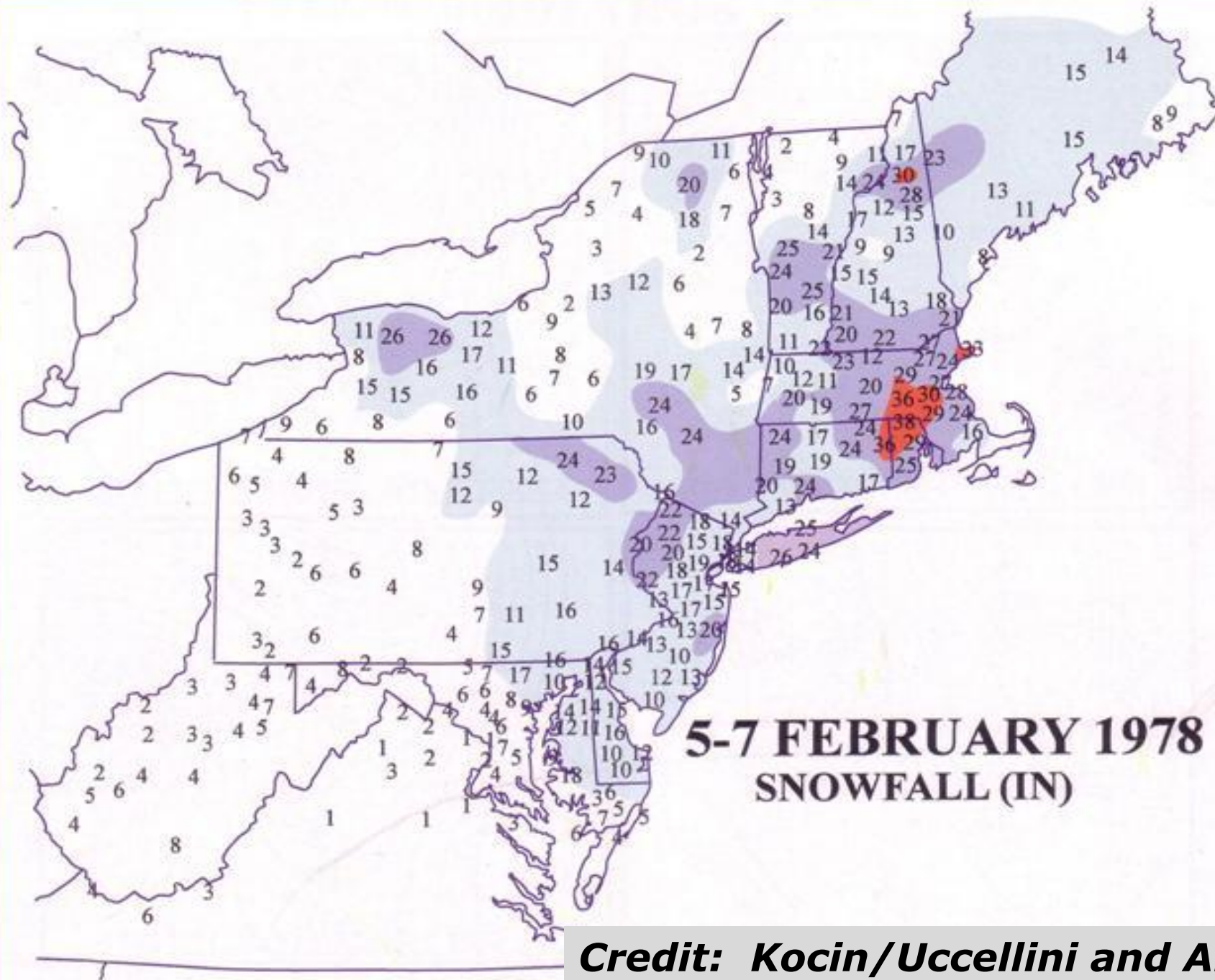


Snowfall Amounts

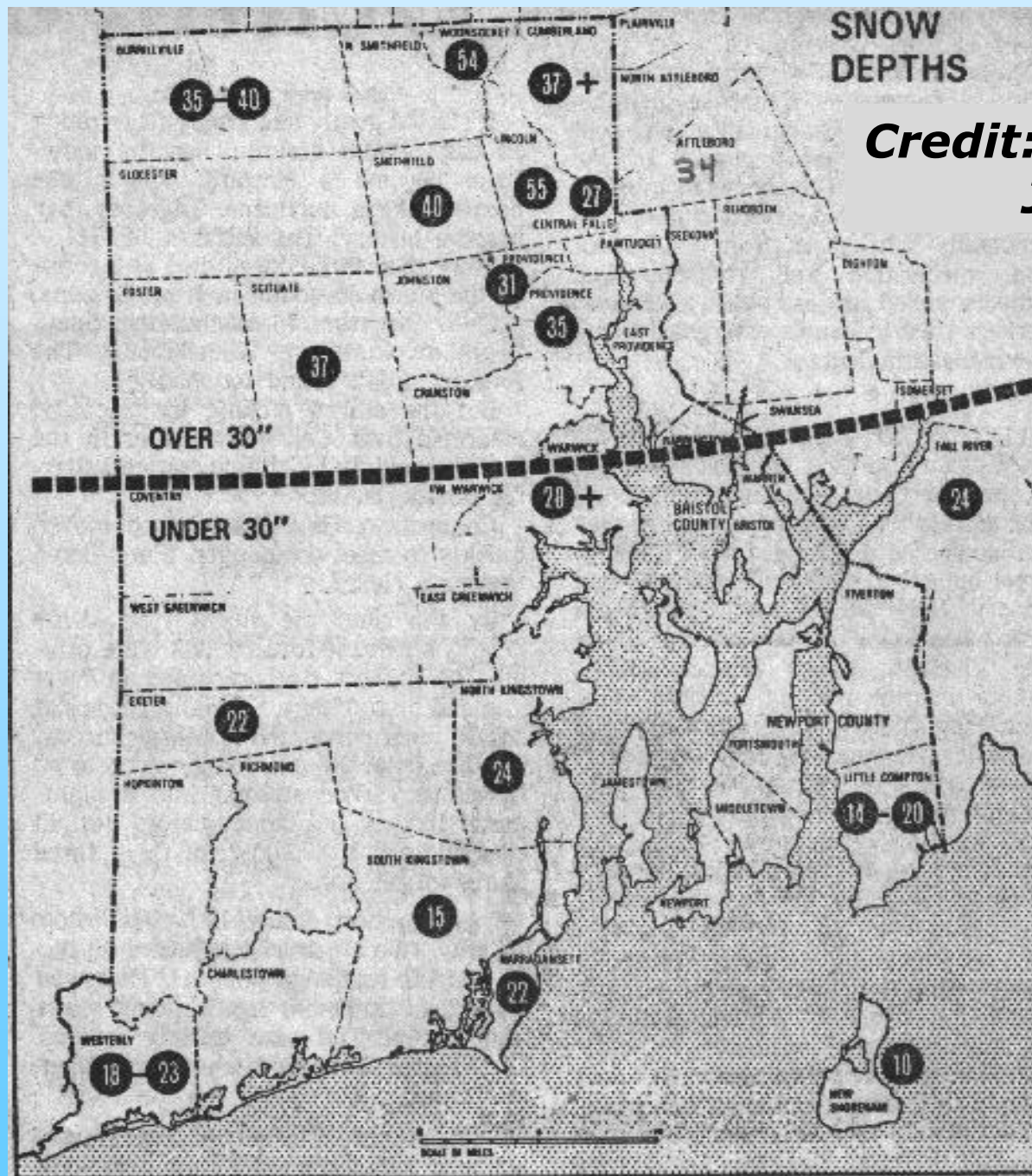


- Woonsocket, RI - 38.0" (official)
- Rockport, MA - 32.5"
- Providence, RI - 27.6"
 - **24 hour snow record 27.3" 10AM Mon-Tue**
- Boston, MA - 27.1"
 - **24 hour snow record 23.6" 7 PM Mon-Tue**
- Worcester, MA - 20.2"
- Hartford, CT - 16.9"
- Snowfall rates -- up to ***3 inches per hour***

The month's only measurable snowfall!!!



Credit: Kocin/Uccellini and AMS



SNOW
DEPTHS

*Credit: Providence
Journal*



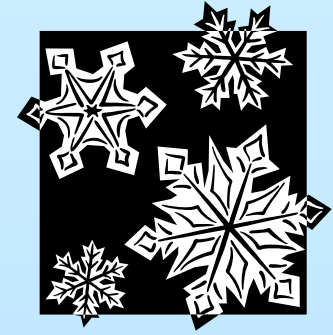
Blizzard Bits



- The Blizzard was forecast remarkably well **several days in advance**
 - Winter Storm Watch issued early Sunday morning (30 hrs in advance)
 - Heavy Snow Watch issued Sunday afternoon
 - Warnings issued early Monday morning
 - “Near blizzard conditions” forecast 15 hours in advance
- Many people stranded on roads because the onset of heavy snow occurred **slightly later than predicted**
- People were **skeptical of the warnings** issued, following a series of inaccurate forecasts the preceding month



Blizzard Bits



- The only Blizzard in Boston (since 1961) to verify on a “sustained” wind of 35 mph for 3 hours or more: 2/6/78 2 PM - 6 PM EST
- Storm lasted nearly 36 hours and paralyzed the entire region for a week
- Deepest Weather Service listed unofficial snowfall: 55 inches (Lincoln, RI) -- Snow drifts as high as ***27 feet***
- Strongest wind gusts
 - Boston -- 79 mph and Chatham -- 93 mph



Blizzard Bits



- Cars abandoned on Routes 95, 195, 146 in greater Providence: 1,950
- Cars stranded along Route 128: 3,500
- Homes destroyed in New England: 2,000
- People in storm shelters (N.E.): 10,000 +
- Total lives claimed by the storm (N.E.): 99
(73 in MA, 26 in RI from American Red Cross)
- Tides about ***4 feet above normal***, then waves driven onshore ***up to 12 feet*** on top of that!
- Total cost of damage (N.E.) \$1 billion

***FALL RIVER: An aerial view of downtown Fall River
on the morning after the snow stopped***

**Courtesy: Andrew Dickerman
Providence Journal**



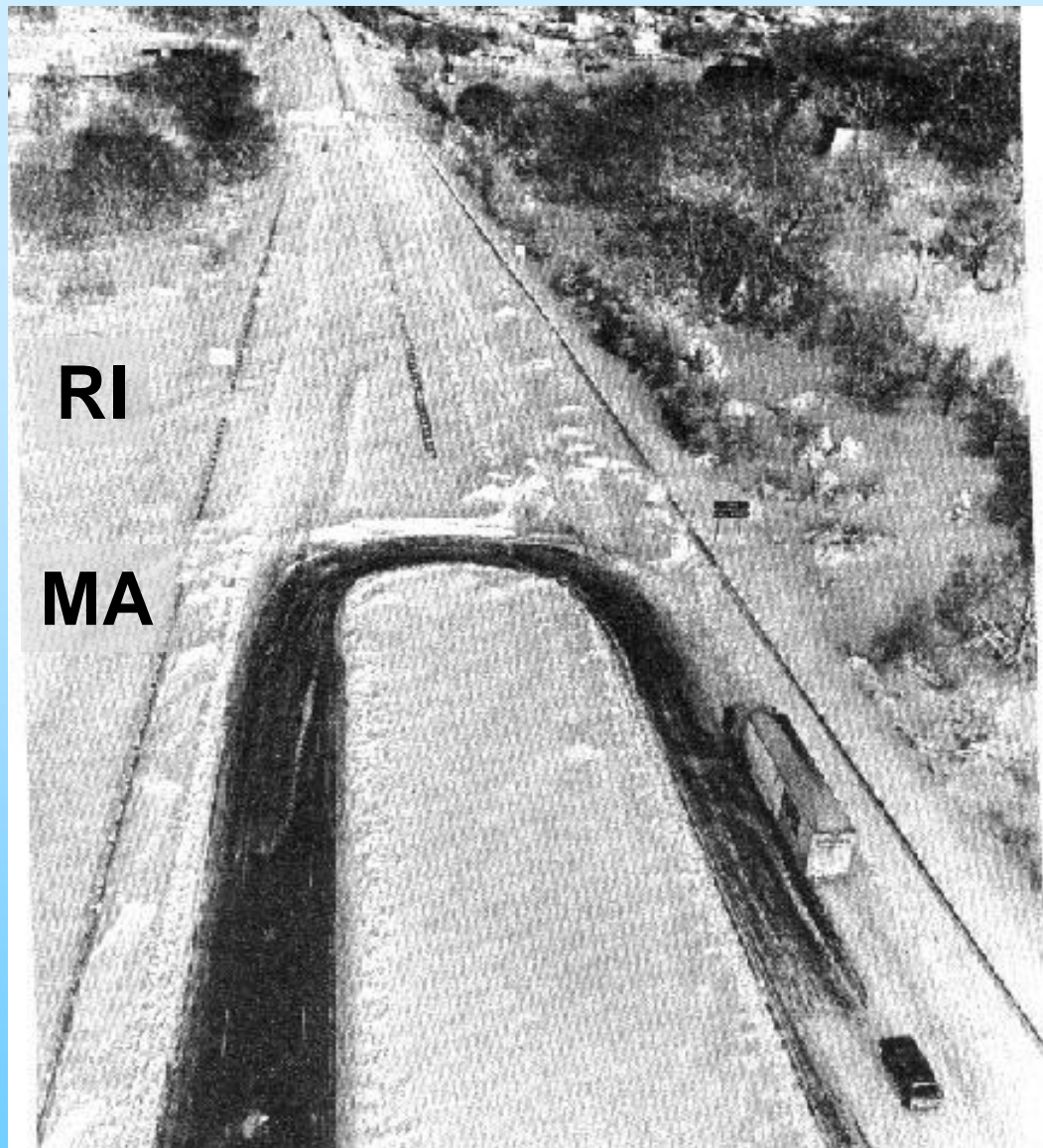


LONG DISTANCE: There are long distance phone calls, and there are long distance phone calls. This woman reached into a phone booth on Broad Street, Providence, and made it the hard way. Of course, there was a reason for it ... the booth was filled with snow.

- Bob Emerson Copyright

**© 1998 The Providence
Journal Company**





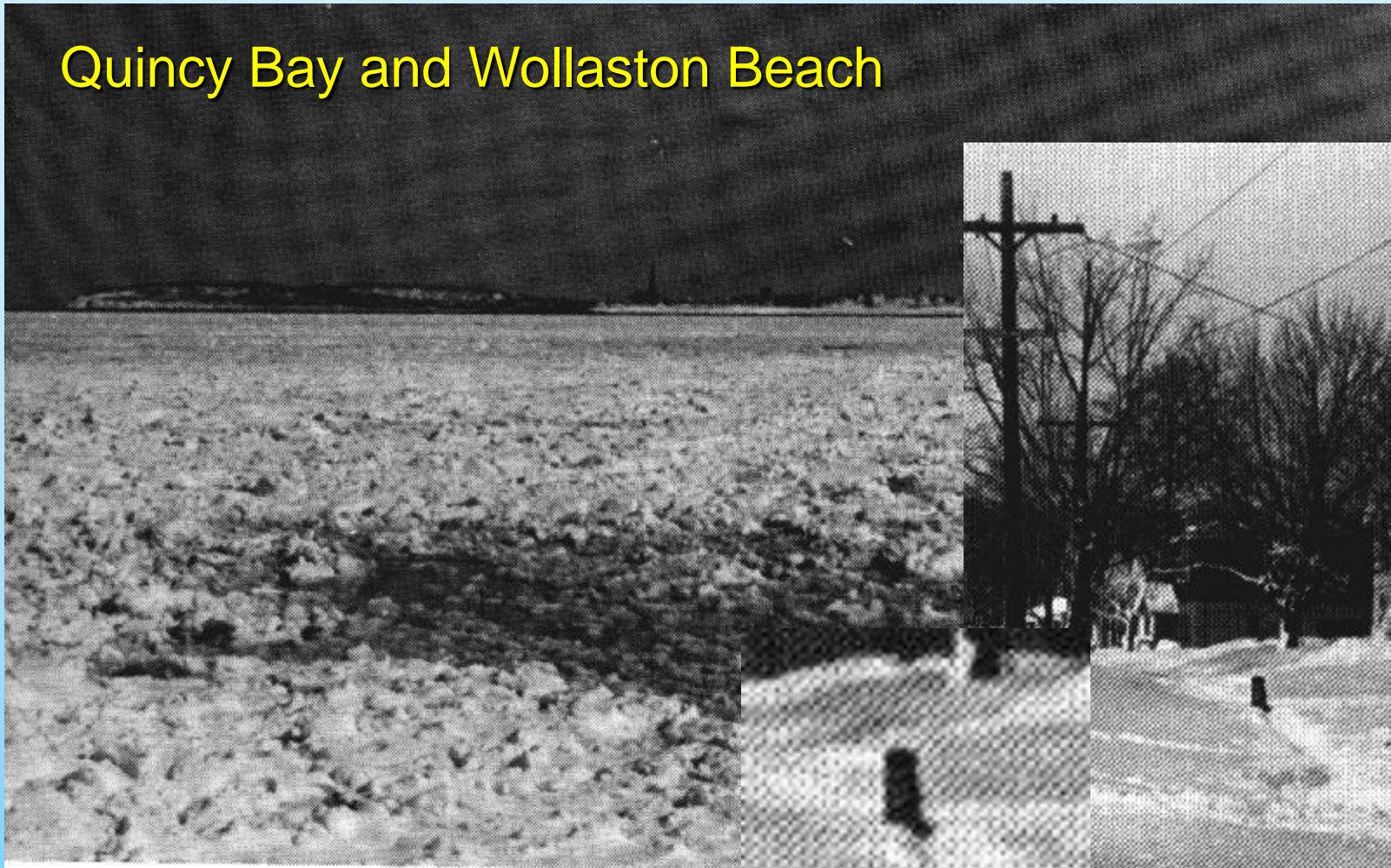
RI

MA

***Seems to be a problem at the Rhode Island border...
Route 195 Westbound, after the Blizzard***

ANDY DICKERMAN

Quincy Bay and Wollaston Beach



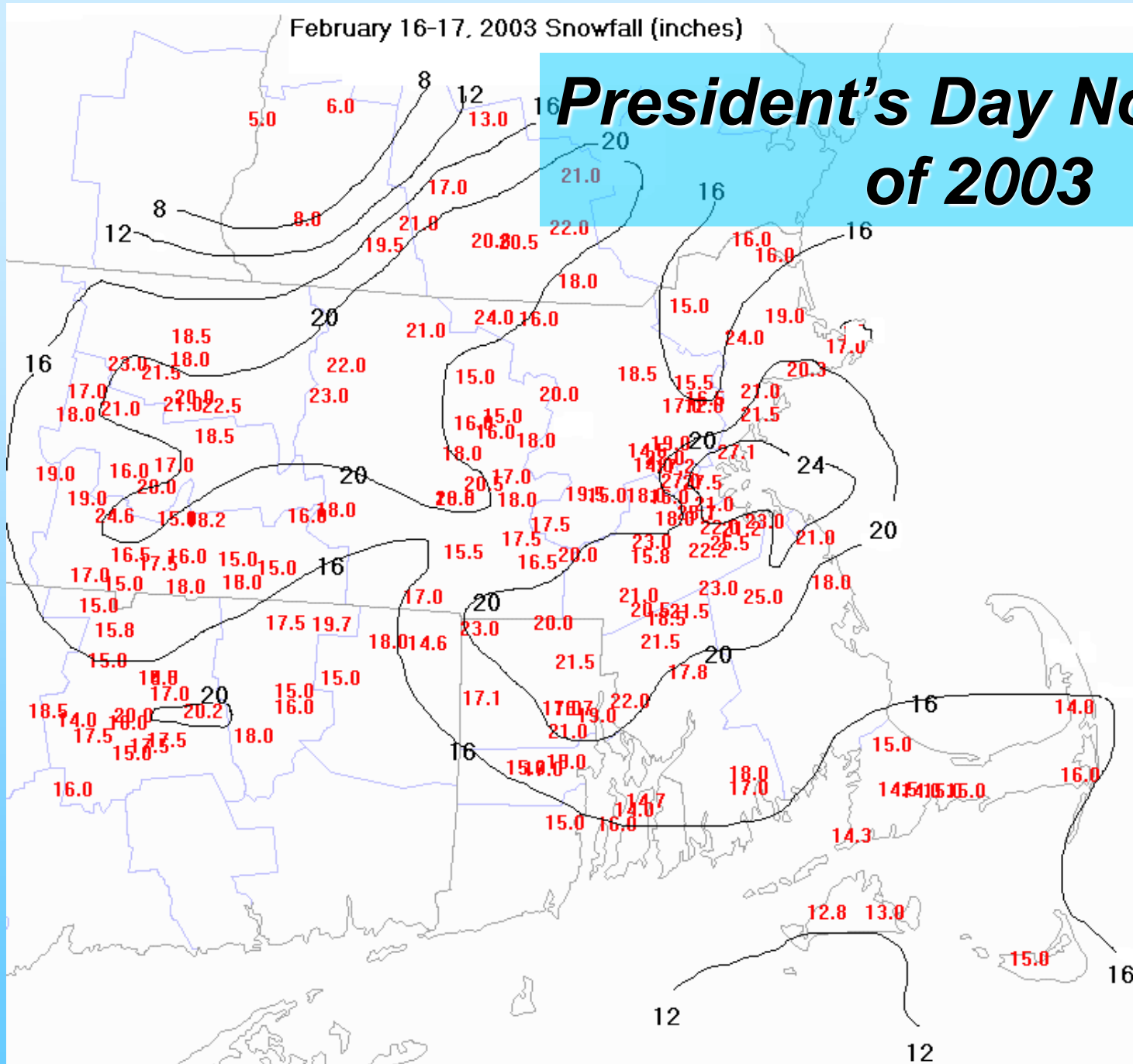
Scenes from Quincy...

**A dog...
looking for his *favorite*
fire hydrant!**

***Comparisons to other
Historic Storms since
1978***

February 16-17, 2003 Snowfall (inches)

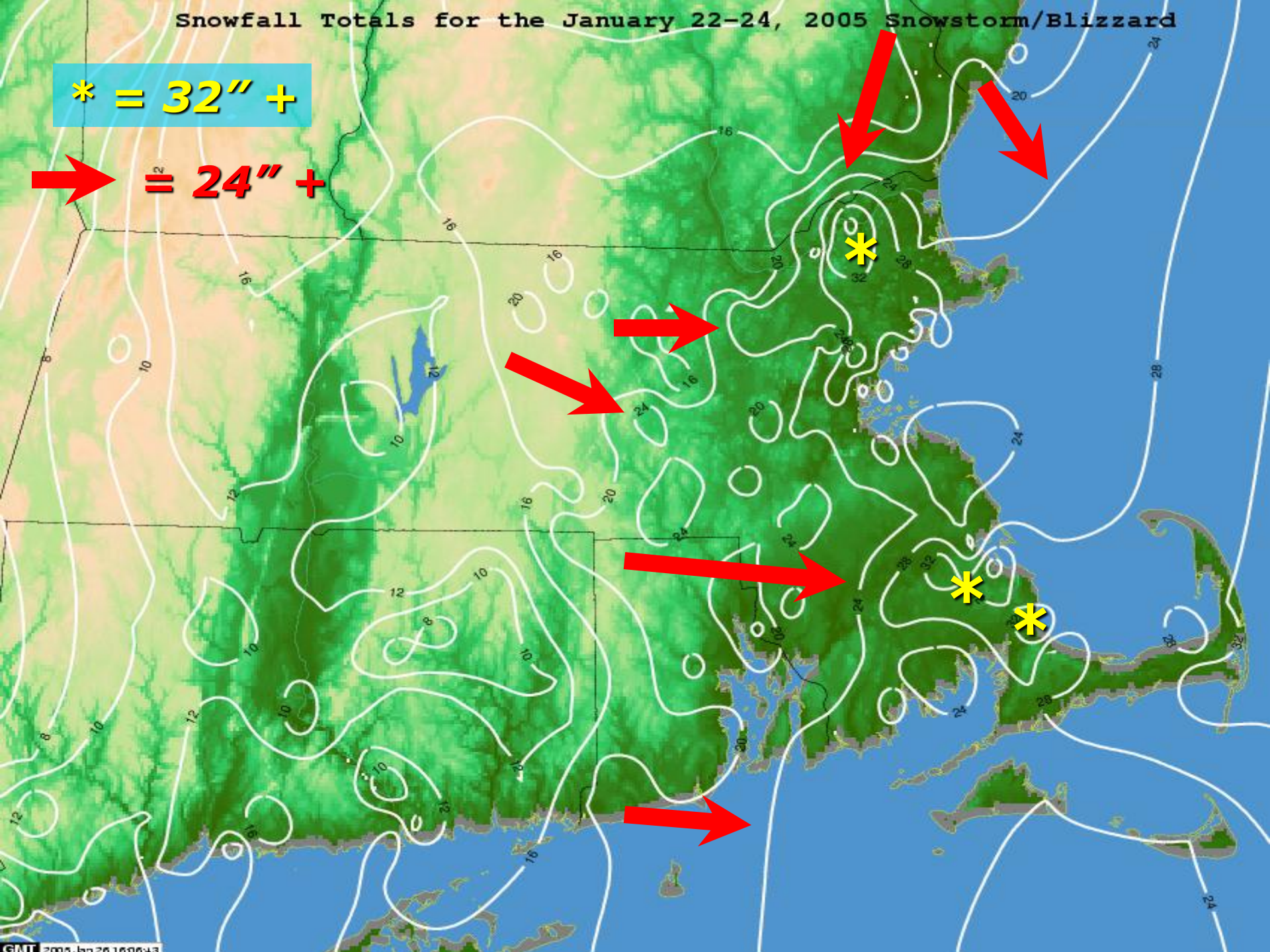
President's Day Nor'easter of 2003



Snowfall Totals for the January 22-24, 2005 Snowstorm/Blizzard

*** = 32" +**

➔ = 24" +



A Comparison of Storms

- **The Blizzard of '78**

- Record snows for several locations (BOS, PVD)
- Officially 38" snowfall with large area of 30+"
- Devastating high tides for FOUR tide cycles (2 days) with continual onshore flow
- MAJOR coastal flooding
- Storm stalled off coast and developed into strong storm, 30+ hour snow duration
- Hurricane force wind gusts

- **President's Day Nor'easter of '03**

- Top 10 historic snowfalls for BOS, PVD, ORH and Blue Hill
- Large area of 20+" snow fall across eastern and north central MA (28" Rockport)
- Astronomical high tide, but only one cycle (12 hours)
- Minor coastal flooding
- Fast moving "weak" storm, ended within 24 hours
- 47 mph peak wind gust

Blizzard of '05

- Fast moving intensifying storm
 - Steadily moved eastward well south of New England
- Snowfall
 - Top 10 historic snowfall – BOS, PVD, ORH, Blue Hill
 - Snowfall ended in about *20-24 hours*
 - Comparable amounts as opposed to Blizzard of '78 and President's Day, but *in a shorter time*
- Coastal Flooding
 - Not as devastating as the '78 Blizzard due to fast movement, though most east coastal locations reported minor flooding
 - Only ***one tide cycle*** affected on astronomical high tide
- Wind
 - Hurricane force wind gusts across several areas of eastern MA and RI



***Stormy Conditions
in Back Bay***

*Credit: Hayden Frank
WFO BOX*

***Scenes from the
Blizzard of '05***



***Tops of Park Benches
in Boston Common!!***



***Greater Boston Area
Photos received by WFO Taunton
from local citizens***

***Plymouth, MA
Credit: Bob Ferioli***



Cape Cod Aftermath
Credit: Barry Donahue
Cape Cod Voice



Credits

- *Northeast Snowstorms*, by Paul J. Kocin and Louis W. Uccellini; American Meteorological Society (AMS), Meteorological Monograph Volume 32 Number 54 in two volumes, 2004
- DOC Natural Disaster Survey Report 78-1, Northeast Blizzard of '78, DOC/NOAA publication
- Boston Globe and Boston Herald American
- Providence Journal
- Worcester Sunday Telegram
- Warwick Beacon (RI)
- Patriot Ledger, Quincy, MA
- Archival records at NWS Taunton
- Cape Cod Times & Cape Cod Voice

